

## WATER QUALITY REPORT

# 2010

**Our Drinking Water Meets All Federal (EPA)  
Drinking Water Requirements.**

### MISSION STATEMENT

The Utilities Department takes pride in maintaining a tradition of producing ample superior quality water, vigilantly maintaining water and wastewater infrastructure, and providing responsive and efficient customer-oriented service in a cost-effective and innovative manner emphasizing responsible environmental stewardship and compliance with all regulatory requirements.

### DIRECTOR'S MESSAGE

The City of Sugar Land Utilities Department is pleased to present the 2010 Annual Water Quality Report. This report describes the City of Sugar Land's water supply and water quality and contains other important information regarding the water we deliver to your tap. As in the past years, we supplied drinking water to our customers that met all health-based drinking water standards and were well below any maximum contaminant levels (MCL). These standards are set by the U.S. Environmental Protection Agency (EPA) and the Texas Commission on Environmental Quality (TCEQ).

We will continue to achieve this high quality water through state-of-the-art water treatment process, extensive rehabilitation and replacement of distribution system piping, diligent

maintenance and operation of facilities, and vigilant monitoring and testing of our water. Approximately \$20 million of the City's Capital Improvement Project funds were spent for drinking water supply related projects last year. In addition, construction of the 67.5 million dollar surface water treatment plant has begun and will be producing treated surface water in 2013. Our water production facilities are operated by TCEQ licensed operators. Our ongoing employee training program ensures high quality water and reliable service is provided to our customers.

Under strict federal and state regulations, TCEQ and our employees take over 100 water quality samples each week throughout the treatment processes and distribution systems. We tested for more than 200 substances, including metals,

minerals, volatile and semi-volatile organic compounds, chlorine disinfection-by-products, and radiological compounds to ensure drinking water safety. The results for 2010 are excellent. We have met every water quality standard and have had no violations. The City of Sugar Land's drinking water is top quality.

I hope you will take a few moments to read this important report. We have great confidence in the water we deliver to our customers and want you to have the same confidence. Please contact us if you have questions or concerns about your water quality, or would like information about any of the Utilities Department's testing, inspection, or water conservation programs.

SuEllen Staggs  
Director of Utilities





## WATER QUALITY

The Texas Commission on Environmental Quality (TCEQ) is responsible for overseeing the state's environmental areas, which includes the City of Sugar Land's water quality. The TCEQ collects and analyzes samples for metals, minerals, volatile and semi-volatile organic compounds, chlorine byproduct compounds and radiological compounds. The TCEQ has rated Sugar Land as having a "Superior" water system, its highest rating.

In addition to TCEQ-required daily process control samples taken at the water plants and system entry points, the City of Sugar Land performs over 85 bacteriological tests monthly in its distribution system and collects quality assurance/quality control samples at least once a week.

## WATER SOURCE

The City currently draws 100% of its drinking water from 17 permitted wells at 6 separate groundwater plants. These are deep wells with an average depth greater than 1200 feet, producing water from the Chicot and Evangeline aquifers. A Source Water Susceptibility Assessment for your drinking water source(s) is currently being updated by the TCEQ. This information describes the susceptibility and types of constituents that may come into contact with your drinking water source based on human activities and natural conditions. Any detection of these contaminants will be found in this report. For more information on source water assessments and protection efforts, please call the Utilities Department at 281-275-2450.

## SECONDARY CONSTITUENTS

Many constituents (such as calcium, sodium or iron), which are often found in drinking water, can cause taste, color and odor problems. The taste and odor constituents are called secondary constituents and are regulated by the State of Texas, not the EPA. These constituents are not causes for health concerns. Therefore, secondaries are not required to be reported in this document but they may affect the

appearance and taste of your water. Secondary constituent information is available on the Utilities Department's page of the City's Web site, [www.sugarlandtx.gov](http://www.sugarlandtx.gov). From the drop down menu, go to "City Services," click on "Water Services," and go to "Water Quality Report."

## OTHER WATER SOURCES

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals, and in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity. Contaminants that may be present in source water before treatment include: microbes, inorganic contaminants, pesticides, herbicides, radioactive contaminants and organic chemical contaminants.

## NOTICE FROM THE EPA

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminant and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline at 800-426-4791. Contaminants may be found in drinking water that may cause taste, color or odor problems. These types of problems are not necessarily causes for health concerns. For more information on taste, odor or color of drinking water, call 281-275-2450. In order to ensure that tap water is safe to drink, the EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration

regulations establish limits for contaminants in bottled water that must provide the same protection for public health.

## IS CRYPTOSPORIDIUM OR GIARDIA IN OUR WATER SUPPLY?

Cryptosporidium and Giardia are waterborne pathogenic organisms. Both are naturally present in the intestines of most mammals including humans, and are passed into the environment through urban runoff or sewage disposal system failure. Exposure to Cryptosporidium or Giardia can lead to symptoms

such as diarrhea, abdominal discomfort, fever, weight loss, malabsorption or anemia. Although not life-threatening to healthy adults, Cryptosporidium and Giardia can be fatal

to infants, the elderly, pregnant women and immunocompromised persons.

Neither Cryptosporidium or Giardia is found in deep wells such as the City of Sugar Land's which are protected from surface water contamination. For more information about Cryptosporidium and Giardia and other microbial contaminants, contact the EPA's Safe Drinking Water Hotline at 800-426-4791.

## UNREGULATED CONTAMINANTS

Unregulated contaminants are those for which the EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist the EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted.

The water system described in this report serves customers within Sugar Land's corporate city limits.

# SUGAR LAND WATER QUALITY OVERVIEW

## Special Notice for the ELDERLY, INFANTS, CANCER PATIENTS, people with HIV/AIDS or other immune problems:

You may be more vulnerable than the general population to certain microbial contaminants, such as Cryptosporidium, in drinking water. Infants, some elderly or immunocompromised persons such as those undergoing chemotherapy for cancer; those who have undergone organ transplants; those who are undergoing treatment with steroids; and people with HIV/AIDS or other immune system disorders can be particularly at risk from

## INFORMATION ON LEAD LEVELS

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The City of Sugar Land is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water

# DRINKING WATER AND YOUR HEALTH

infections. You should seek advice about drinking water from your physician or health care provider. Additional guidelines on appropriate means to lessen the risk of infection by Cryptosporidium are available from the Safe Drinking Water Hotline 800-426-4791.

for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at [www.epa.gov/safewater/lead](http://www.epa.gov/safewater/lead).





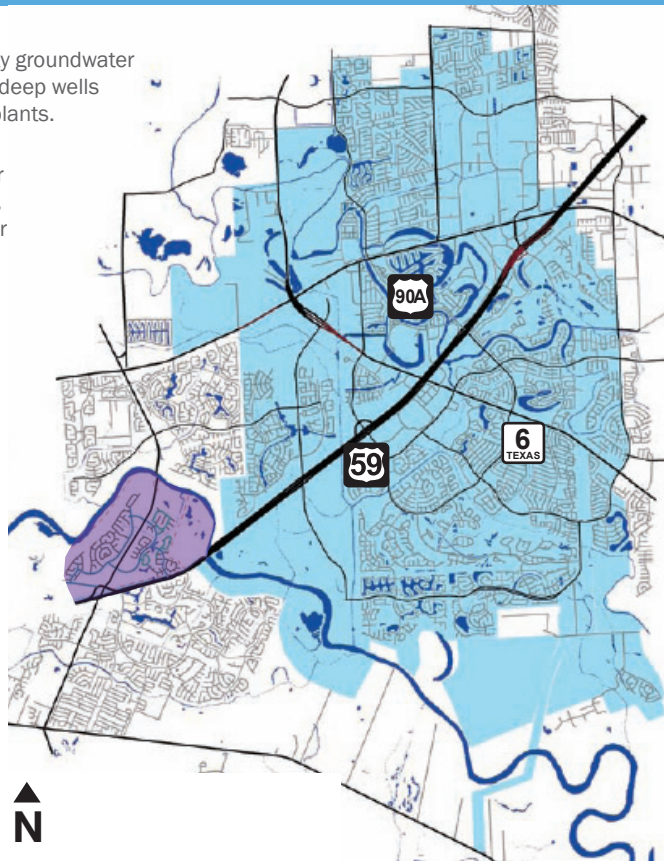
# CITY OF SUGAR LAND - RIVERPARK PUBLIC WATER SYSTEM #0790354

1. Water comes from high quality groundwater sources and is pumped from deep wells into one of our groundwater plants.

2. Even though our groundwater is already of excellent quality, chlorine is added at our water plants to protect the finished water against microbial contaminants as it travels through the water system. Corrosion inhibitors are also added to reduce corrosion of metal components within the homeowner's private plumbing system.

3. Water then travels to your residence or place of business where you are provided with top quality and absolutely safe water.

 Sugar Land water system  
 RiverPark water system



## PRODUCTION AND DISTRIBUTION PROFILE CITY OF SUGAR LAND AND SUGAR LAND RIVERPARK

Annual system demand: 6.0 - 6.5 billion gal

Maximum peak

Daily demand: 27.3 million gal

System capacity: 43.2 million gal/day

Daily average demand: 15.48 million gal

Daily average

Demand per capita: 223 gal

Number of wells: 17

Average well depth: 1,250 feet

Ground storage capacity: 12.23 million gal

Elevated storage facilities: 4 towers/  
4.3 million gal

Miles of distribution line: 412

Number of water meters: 26,900

Number of fire hydrants: 3,733

Number of valves: 5,127

Groundwater source: Chicot and Evangeline aquifers

## INORGANIC CONTAMINANTS

For each constituent, the Average, Minimum and Maximum Level Columns represent the City's water testing results.

YEAR OR RANGE	CONTAMINANT	AVERAGE LEVEL	MINIMUM LEVEL	MAXIMUM LEVEL	MCL	MCLG	UNIT OF MEASURE	SOURCE OF CONTAMINANT
2008	Fluoride	0.35	0.35	0.35	4	4	ppm	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories.
2010	Nitrate	0.05	0.05	0.05	10	10	ppm	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.
2010	Barium	2	2	0.159	2	2	ppm	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.

## SYNTHETIC ORGANIC CONTAMINANTS INCLUDING PESTICIDES AND HERBICIDES

YEAR	CONTAMINANT	HIGHEST LEVEL DETECTED	RANGE OF LEVELS DETECTED	MCLG	MCL	UNIT OF MEASURE	VIOLATION	SOURCE OF CONTAMINANT
2010	Di (2-ethylhexyl) phthalate	0.62	0.62 - 0.62	0	6	ppb	No	Discharge from rubber and chemical factories.

## MAXIMUM RESIDUAL DISINFECTANT LEVEL

YEAR	DISINFECTANT	AVERAGE LEVEL	MINIMUM LEVEL	MAXIMUM LEVEL	MRDL	MRDLG	UNIT OF MEASURE	SOURCE OF DISINFECTANT
2010	Chlorine Residual, Free	1.22	0.75	1.80	4	<4	ppm	Disinfectant used to control microbes.

Disinfection Byproducts: NOT REPORTED OR NONE DETECTED

Unregulated Initial Distribution System Evaluation of Disinfection Byproducts: WAIVED OR NOT YET SAMPLED

Unregulated Contaminants: NOT REPORTED, OR NONE DETECTED

Organic Contaminants: TESTING WAIVED, NOT REPORTED, OR NONE DETECTED

Not Required: TURBIDITY

Not Detected In Reported Monthly Tests: TOTAL COLIFORM, FECAL COLIFORM BACTERIA

## RADIOACTIVE CONTAMINANTS

YEAR	CONTAMINANT	HIGHEST LEVEL DETECTED	RANGE OF LEVELS DETECTED	MCLG	MCL	UNIT OF MEASURE	VIOLATION	SOURCE OF CONTAMINANT
4/29/2008	Gross Alpha including radon and uranium	3	3 - 3	0	15	pCi/L	No	Erosion of natural deposits.
4/29/2008	Radium 228	Less than detection limit	Less than detection limit	0	5	pCi/L	No	Erosion of natural deposits.
4/29/2008	Gross Beta Particle Activity	Less than detection limit	Less than detection limit	0	50	pCi/L	No	Decay of natural & man-made deposits.

## LEAD AND COPPER

The 90th percentile score for lead and copper indicates the measure, in parts per billion, that 90% of the homes sampled are at or below.

YEAR	CONTAMINANT	THE 90TH PERCENTILE	NUMBER OF SITES EXCEEDING ACTION LEVEL	ACTION LEVEL	UNIT OF MEASURE	SOURCE OF CONTAMINANT
2009	Lead	1.4	0	15	ppb	Corrosion of household plumbing systems; erosion of natural deposits.
2009	Copper	0.118	0	1.3	ppm	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.

The City has participated in the second cycle of the (2008) Unregulated Contaminant Monitoring Regulation (UCMR2). Our sampling did not show any positive results for contaminants tested by the USEPA. Data is available for your review at 111 Gillingham Lane, Sugar Land, Texas 77478.

# DEFINITIONS AND ABBREVIATIONS OF CONTAMINANTS

## CUSTOMER SERVICE IS OUR NUMBER ONE PRIORITY

We take pride in the water that is provided to our customers and we are continually striving to improve our service to you. To accomplish this goal, we need your help. Any time you find your water quality or service response is below your expectations, please contact us at 281-275-2450. We will respond promptly and professionally.



To participate in future public meetings concerning our drinking water please call us at [281-275-2450](tel:281-275-2450). Sugar Land City Council meets regularly at 5:30 p.m. on the 1st, 3rd and 4th Tuesday of the month.

## EN ESPAÑOL

Este reporte incluye información importante sobre el agua para tomar. Para asistencia en español, favor de llamar al telefono [281-275-2450](tel:281-275-2450).

## DEFINITIONS

### ACTION LEVEL (AL)

The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

### CONSTITUENT

Federally regulated or monitored analyte.

### INORGANIC CONTAMINANTS

Salts and metals which can be naturally occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.

### MAXIMUM CONTAMINANT LEVEL (MCL)

The highest permissible level of a contaminant in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

### MAXIMUM CONTAMINANT LEVEL GOAL (MCLG)

The level of a contaminant in drinking water below which there is no known or expected health risk. MCLGs allow for a margin of safety.

### MAXIMUM RESIDUAL DISINFECTANT LEVEL (MRDL)

The highest level of disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminant.

### MAXIMUM RESIDUAL DISINFECTANT LEVEL GOAL (MRDLG)

The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contamination.

### MICROBIAL CONTAMINANTS

Viruses and bacteria which may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife.

### ORGANIC CHEMICAL CONTAMINANTS

Synthetic and volatile organic chemicals which are by-products of industrial processes and petroleum production; can also come from gas stations, urban storm water runoff and septic systems.

### PESTICIDES AND HERBICIDES

These may come from a variety of sources such as agriculture, urban storm water runoff and residential uses.

### RADIOACTIVE CONTAMINANTS

Naturally occurring or the result of oil and gas production and mining activities.

### TREATMENT TECHNIQUE (TT)

A required process intended to reduce the level of a contaminant in drinking water.

### TTHM

Total Trihalomethanes

## ABBREVIATIONS

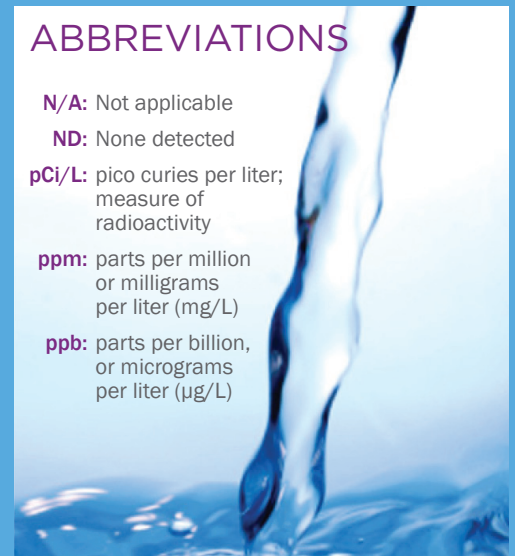
**N/A:** Not applicable

**ND:** None detected

**pCi/L:** pico curies per liter; measure of radioactivity

**ppm:** parts per million or milligrams per liter (mg/L)

**ppb:** parts per billion, or micrograms per liter (µg/L)



**CITY OF SUGAR LAND**

Utilities Department  
111 Gillingham  
Sugar Land, TX 77478

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